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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,767	09/11/2000	Hiroyuki Ishii	P/126-189	4989

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EXAMINER	
CORRIELUS, JEAN B	
ART UNIT	PAPER NUMBER

2631

13

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/659,767

Applicant(s)

ISHII ET AL.

Examiner

Jean B Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40,41,43,44,58 and 59 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,17-19,31 and 45-47 is/are rejected.
- 7) ☒ Claim(s) 6-16,20-30,32-39,42 and 48-57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 104 11
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 4, 5, 18, 19, 46 and 47 is withdrawn in view of the newly submitted reference(s) to Taira et al and Yutaka et al, filed on 3/24/04.

Rejections based on the newly submitted reference(s) follow.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 4-7, 9-16, 30, are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 18-29 and 42, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hachisuka et al US Patent No. 5,598,430 in view of Dykema et al US patent No. 6,091,343.

As per claims 1 and 17, Hachisuka et al discloses a receiver fig. 6 having a logic discriminator circuit 111 for discriminating whether the modulation type of the reception signal is an analog modulation type or a digital modulation type. See col. 4, lines 28-32.

However, Hachisuka et al does not teach the further limitation of discriminating whether the reception signal is an AM or FM signal. In the same field of endeavor, Dykema et al teaches the further limitations of discriminating whether the reception signal is an AM or FM signal see col. 3, lines 30-42. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Hachisuka et al in order to effectively use of the components of the reception device.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hachisuka et al US Patent No. 5,598,430 in view of Dykema et al US patent No. 6,091,343 further in view of Nourrcier US patent No. 5,289,252.

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As applied to claim 1 above, Hachisuka et al and Dykema et al discloses every feature of the claimed invention but does not explicitly teach the further step of determining whether the signal is a linear or non-linear. Nourrcier discloses such feature of the claim see col. 4, lines 35-50. it would have been obvious to one skill in the art to incorporate such a teaching in Hachisuka et al and Dykema et al in order to provide corrections to the signal to insure linear modulation of the transmitted signal see Courrcier col. 3, lines 44-47.

7. Claims 31 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hachisuka et al US Patent No. 5,598,430 in view of Nourrcier US patent No. 5,289,252.

As applied to claim 1 above, Hachisuka et al discloses every feature of the claimed invention but does not explicitly teach the further step of determining whether the signal is a linear or non-linear. Nourrcier discloses such feature of the claim see col. 4, lines 35-50. it would have been obvious to one skill in the art to incorporate such a teaching in Hachisuka et al in order to provide corrections to the signal to insure linear modulation of the transmitted signal see Courrcier col. 3, lines 44-47.

As per claim 45 it would have been obvious to one skill in the art to include means for extracting an envelope and a symbol clock from the reception signal in order to properly synchronize the receiver with the remote station or transmitter.

8. Claims 4, 18 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hachisuka et al US Patent No. 5,598,430 in view of Dykema et al US patent No.

6,091,343 further in view of Nourrcier US patent No. 5,289,252 and further in view of Technical report of IEICE, Keio University, pages 47-54 by Taira et al.

As applied to claim 1 above, Hachisuka et al, Dykema et al and Nourrcier disclose the invention substantially as claimed but does not explicitly teach the further limitations of discriminating whether the signal is 16-QAM, BPSK, QPSK, $\pi/4$ -QPSK, 8 PSK, M-ary PSK or an M-ary QAM signals. In the same field of endeavor, Taira teaches such additional feature of the claimed invention see for instance page 51. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Hachisuka et al, Dykema et al and Nourrcier so as to enhance the receiver capability to detect a long range of different modulation types.

9. Claims 5, 19 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hachisuka et al US Patent No. 5,598,430 in view of Dykema et al US patent No. 6,091,343 further in view of Nourrcier US patent No. 5,289,252 and further in view of Yutaka JP10267972.

As applied to claim 1 above, Hachisuka et al, Dykema et al and Nourrcier disclose the invention substantially as claimed but does not explicitly teach the further limitations of discriminating whether the signal is 16-QAM, BPSK, QPSK, $\pi/4$ -QPSK, 8 PSK, M-ary PSK or an M-ary QAM signals. In the same field of endeavor, Yutaka teaches such additional feature of the claimed invention see for instance page 51. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Hachisuka et al, Dykema et al and Nourrcier so as to enhance the receiver capability to detect a long range of different modulation types.

Allowable Subject Matter

10. Claims 6-16, 30, 32-39 and 48-57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Note that the claims need to be amended, if necessary, to overcome any objection sets forth above.

11. Claims 40, 41, 43, - 44, 58 and 59 are allowed.

Response to Arguments

12. Applicant's arguments filed 5/12/04 have been fully considered but they are not persuasive. It is alleged that modifying Hachisuka to add analog modulation type discrimination means, as suggested by Dykema et al, would go completely against the design goal of Hachisuka. Examiner disagrees. At col. 2, lines 6-9, the design goal of Hachisuka is to provide an apparatus which can make a determination at **a high speed** as to whether a receiver input is an analog modulation signal or a digital modulation signal. Adding the additional element to discriminate whether the reception signal is an AM or FM will not in any way change the principle operation of Hachisuka, i.e., the high speed processing of the received signal. Such modification surely would have enhanced Hachisuka.

Conclusion

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is (703) 305-4023. The examiner can normally be reached on Monday-Thursday from 7:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour, can be reached on (703) 306-3034.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.


Jean B. Corrielus

Primary Examiner

TC-2600 6/10/04